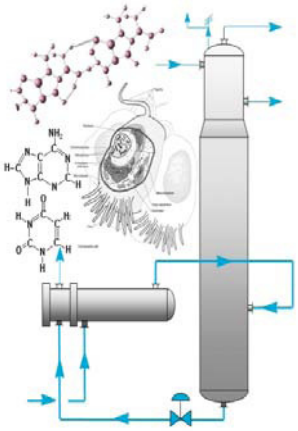
AIChE Chicago Section

April Newsletter

Chicago Section www.aiche-chicago.org April 2011



Inside this issue:

AIChE Chicago

April 2011 Meeting Notice

Electrofuels: ARPA-E and Innovation in the Biofuels Space

Dr. Eric Toone

Date: ***Tuesday April 12th, 2011***

Location: **IIT Campus**

IIT Campus—McCormick Tribune Campus Center, MTCC

Pritzker Club

3201 South State Street, Chicago, IL 60616

Cost: **Members: $15** **Non-Members: $20**

Students: $5 **Unemployed Members: $10**

To Register CLICK the Link

http://guest.cvent.com/d/bdq696/4W

Agenda

5:00 PM	**Poster Setup**
5:30 PM	**Registration &Social Hour**
	Buffet Dinner & Poster Viewing
7:30 PM	**General Meeting & Awards Presentations**

Chair's Corner

The youth of today will be our future. AIChE Chicago section believes in this axiom. We have several programs to encourage the pre-college student to consider science and engineering as a future profession; the college and graduate student to continue their studies in chemical engineering and the new engineer to engage in the profession.

Each fall we have a school program associated with the Midwest Conference. We arrange for an interesting chemical engineer (this year was an astronaut) to talk with about 400 middle school and high school students. We also do some hands on workshops explaining what a chemical engineer is all about.

On April 12th our monthly meeting will be prefaced with a student poster contest. Both graduate and undergraduate student winners will be awarded an honorarium. We are also going to be giving out awards to the top students nominated by their professors at UIC, IIT and Northwestern Universities. In addition we are going to give an honorarium to the AIChE student chapter of IIT in recognition of their hosting the Midwest Conference.

We also encourage our young professionals to join the YPAB. This group of younger engineers conducts social and educational programs that appeal to the young professional. In addition they participate in E-week where they conduct programs for primary school children.

This month our section is sponsoring an outing to the water treatment plant for high school teachers. We hope that these outreach programs will make these teachers aware of issues that chemical engineers are best suited to help resolve.

The youth of today are our future and the AIChE Chicago Section will continue to conduct programming which encourages their participation.

Steve Rosenblum—UOP

Teacher Outreach in Chicago

On the afternoon of Friday, April 1, the K-12 Outreach committee ran an educational seminar for high school science and math teachers in the Chicago Area at the Jardine Water Filtration Plant. Teachers are the biggest influence in a student's future, so in order to inspire more students; we decided to start with the teachers. This event helped explain what chemical engineers really do, so the educators can better prepare their students for a future in engineering.

We started the event with a general overview of Chemical Engineering and then followed the overview with a tour of the Jardine Filtration Plant. After the tour, representatives from the UIC Chemical Engineering department spoke about how to prepare students for a career in engineering. To get the teachers thinking like engineers, we then had an interactive problem solving activity. We ended the afternoon with a panel discussion of four speakers with the topic "My Life as a Chem Eng". Thank you to all the volunteers and speakers who helped make this a successful event!
To view some of the pictures please on the link below;
https://picasaweb.google.com/aichechicagowebsite

Meagan Lewis, Event Chair

April 2011 Meeting Information

Speaker Biography;

Dr. Eric Toone is the Deputy Director for Technology for the Advanced Research Projects Agency – Energy (ARPA-E), responsible for oversight of all ARPA-E Technology and directs the ARPA-E's Electrofuels program. In addition to his role at ARPA-E, Toone is currently the Anne T. and Robert M. Bass Professor of Chemistry and Professor of Biochemistry at Duke University.

Toone is a scientific founder of two venture-backed companies: Aerie Pharmaceuticals, a research-based ophthalmology company, and Vindica Pharmaceuticals, a nitric oxide delivery company.

He has served as a permanent member of the Bioorganic and Natural Products Study Section at the National Institutes of Health, and is currently a member of the NSERC Organic & Inorganic Review panel (Canada).

Toone has authored over 100 scientific papers and over 30 patents. He is an associate editor of the journal Biopolymers and the editor in chief of the monograph series Advances in Enzymology.

He studied chemistry as an undergraduate at the University of Guelph, graduating in 1983. That same year he moved to the University of Toronto to begin graduate studies with Professor J. Bryan Jones. Toone graduated from the University of Toronto in 1988 and moved to Harvard University to continue his studies with Professor George Whitesides.

Abstract:

Electrofuels: ARPA-E and Innovation in the Biofuels Space

ARPA-E is seeking new ways to make liquid transportation fuels - without using petroleum or biomass - by using microorganisms to harness chemical or electrical energy to convert carbon dioxide into liquid fuels. Many methods of producing advanced and cellulosic biofuels are under development to lessen our dependence on petroleum and lower carbon emissions. Most of the methods currently under development involve converting biomass or waste, while there are also approaches to directly produce liquid transportation fuels from sunlight and carbon dioxide. Although photosynthetic routes show promise, overall efficiencies remain low. The objective of this topic is to develop an entirely new paradigm for the production of liquid fuels that could overcome the challenges associated with current technologies.

What AIChE Means to Me? Don Chmielewski

In one word: Community! At all levels, AIChE seems to be a rallying point where chemical engineers form communities.

My first exposure to AIChE was in 1996 at the Annual Meeting in Chicago. I had just defected from Electrical Engineering at UCLA and started my PhD in Chemical Engineering with Professor Vasilios Manousiouthakis. I had attended a control systems conference a few years earlier and thought I knew what to expect. Well, control conferences tend to attract more mathematicians, who dress a bit more casually. So, when I arrived with only casual clothes and notice how many suits were walking around I felt a bit out of place. Fortunately, the Palmer House had a department store across the street where I bought a shirt and tie. (To this day that tie is still my favorite. I suspect many of you have seen it many times.) By the day of my presentation I thought I had things under control. But, then Vasili told me he had been "talking up the presentation" and telling people that we have BIG results. By the time of the talk the room was packed with a line of people out the door trying to grab the last bit of standing room. During my practice runs I had realized that my nervousness caused my mouth to run dry, so just before the presentation I poured myself a cup of water. Now, back in those days we used overhead projectors and my presentation was actually contained in a box of transparencies placed next to the projector and the cup of water. So, about three slides into the presentation I spilled my cup of water into the box of transparencies. The room was silent. The next transparency I pulled out was dripping wet. I looked to my advisor and he motioned to keep going. So, I put the wet transparency on the hot projector and it turned to a kaleidoscope of colors as the water quickly dried. At this point the room roared with laughter, but a good kind of laugher. I saw the faces in that audience being sympathetic and gesturing that it was ok. After that point, the ice was broken and all nervousness seemed to slip away. I finished the presentation, answered a few questions and in my ignorant youth felt like I just imparted some great knowledge to that audience. The truth is that that presentation did not mean much in the great scheme of things. What did matter was that many of the folks in that audience would eventually become some of my most trusted colleagues. These friendships are what keep me going back to Annual Meeting. In fact, I am proud to say I have attended every annual meeting since.

The story of the Chicago Local Section is similar. I attended my first local section meeting in April of 2002, the student night meeting at UIC. My only reason for attending that night was to read the citation for the IIT McCormack award winner (I believe it was Ajay Jayprakash that year). The speaker that night was Professor Bob Bird, and since I was aware of the legendary nature of BSL, I figured this would be the

high point of the night. However, I was pleasantly surprised to find out that many of the folks attending these meeting were actual chemical engineers, who actually implemented the things we academics only talk about in theory. And, not only could you view these rare species, but some of them would even talk to you. Over the years I have found the local section to be a strong community, where colleagues become friends and the motivation to attend a meeting has less to do with the topic of the speaker and more to do with the camaraderie of old friends.

The student chapters are also a community. In my years of advising, I have observed that the strength of a chapter is directly proportional to the interpersonal bonds of the students involved. Friends will help each other when event planning gets tough, and friends will attend an event even if there is an exam the next day. I enjoy advising the chapter because it gives me a way to know and care about students that is distinct from the sterile atmosphere of a classroom.

Many of my academic colleagues ask why I invest so much time in the local section and the student chapter. They seem to understand involvement in the Annual Meeting, where the Ivory Tower dominates and many of the folks one meets are likely to be reviewers for your next paper, proposal or promotion. I usually shrug and mumble something about doing it for the students. I could tell them the story I just told you, but then again if they are asking the question then it is unlikely they will understand anyway.

Donald J Chmielewski is an Associate Professor in the Department of Chemical and Biological Engineering at the Illinois Institute of Technology.

Historical Engineering Events in April

April 6, 1938 – Teflon ® is discovered.

April 14, 1932 – First atom is split by a proton beam on a lithium target.

April 16, 1977 – Apple II personal computer released, featuring a central processing unit (CPU), keyboard, floppy disk drive, and a $1,300 price tag.

April 19, 1957 – Release of FORTRAN programming language.

April 25, 1925 – Florence Rena Sabin is the first woman elected to National Academy of Science.

April 25, 1961 – Robert Noyce and Fairchild awarded patent for the integrated circuit.

April 26, 1986 – The Chernobyl nuclear plant exploded in the Ukraine and parts of Belarus, Russia; it was the world's worst civil nuclear catastrophe.

April 29, 1998 – Ten percent of the Amazon rain forest is preserved. On this day, Brazil agreed to set aside about 25 million ha (62 million ac) of the Amazon rain forest for conservation in cooperation with the World Bank and the World Wildlife Fund.

April 30, 2008 – Toyota Prius worldwide sales top 1 million mark.

Four Day Training Workshop

Applications of Fuzzy Sets and Fuzzy Logic in Informatics

Sponsored by

Vishwamitra Research Institute,

Center for Uncertain Systems: Tools for Optimization and Management

Venue: University of Illinois at Chicago

Contact: Urmila Diwekar urmila@vri-custom.org

The workshop is free for participants.

Prologue

Dealing with uncertainty has been one of the objectives of scientific research over a period of time. The formalisms based statistical mechanics; optimization techniques and soft computing are some of the useful techniques in decision research. In this workshop, we propose to focus on fuzzy sets and fuzzy logic with applications in informatics. It will be our endeavour to cover some of the fuzzy logic based applications in *Enviro informatics, Bioinformatics, Medical informatics and Chemo informatics.*

Day 1 [Date May 03, 2011]

Introduction of Fuzzy sets and Fuzzy logic

Background; uncertainty and imprecision; statistics and random processes; uncertainty, fuzzy sets and membership; chance versus ambiguity. Classical Sets and Fuzzy Sets: Operations and properties of classical (crisp) sets and fuzzy sets; mapping of classical sets to functions [Examples], Utility of the concept of fuzzy Polynucleotide in drug addiction and fuzzy genome in bioinformatics, a commentary on Type 2 fuzzy sets,

Fuzzy Arithmetic

Membership Functions (MF), Extension Principle, Fuzzy Arithmetic:

MF value assignments techniques: inference, rank ordering, angular fuzzy sets, fuzzy sets from the data, *Fuzzy Arithmetic:* Extension principle with examples; interval arithmetic; Vertex method, DSW algorithm, fuzzy vectors, fuzzy numbers; fuzzy hedges; degree of match/ agreement index *[A Case study on Agreement Index for water consumption, and fuzzy fault tree analysis]*\

Day 2 [May 04, 2011]

Classical Relations and Fuzzy Relations

Cardinality, operations and properties of crisp and fuzzy relations; fuzzy Cartesian product and composition; crisp and fuzzy tolerance and equivalence relations, transitive closure. Illustrative examples. *[A Case Study: Fuzzy modeling in Medical diagnosis using compositional rule of inference]*

Day 3 and 4 [May 05-06, 2011]

Classical logic and Fuzzy logic

Computing With Words, a Case study on CW1 complexity ÇCW2 Complexity, Human Level Machine Intelligence, Tautologies; contradictions; equivalence; approximate reasoning, Classical logic and Fuzzy logic, Fuzzy rule based systems, *Fuzzy- to- Crisp Conversions:* Lambda-Cuts, Defuzzification methods; Mamdani rules, TSK rules; FAT/FAM Theorem **Case Studies:** *Water Quality and Air Classification using fuzzy rule base system; fuzzy logic based infusion pump for anesthesia];Fuzzy MCDM for Ranking of Industries. Maintenance of industrial equipment: degree of certainty with fuzzy modeling using predictive maintenance*

Day 4 [May 06-2011]

Fuzzy Classification and Clustering and Fuzzy Pattern recognition

Classification by equivalence relations-Crisp relations and fuzzy relations, application of fuzzy equivalence relation in phylogenic tree construction and biotechnology illustration Classification and Cluster analysis- Hierarchical clustering and partitioning or Hard c-Mean (HCM) Fuzzy c-Mean (FCM), [Example: Catalytic converter and some more].; Foundation of phylogenetic tree construction, exclusively for bioinformatics professionals. Foundation of pattern recognition

Decision Making in Fuzzy Environment

Fuzzy Goals and Constraints, Fuzzy Bayesian decision making with an example,

Fuzzy Measures and Total Uncertainty

Fuzziness V/s ambiguity, Belief measures, plausibility measures, Dempster Shafer Theory of evidence theory, probability measures, necessity, possibility theory, Foundation of Total Uncertainty

Chair: Berkeley Initiative in Soft Computing (BISC)-Special Interest Group (SIG)-Environment Management Systems (EMS); Guest Faculty: University of California, Berkeley California USA; Visiting Faculty: Vishwamitra Research Institute (VRI), Chicago USA; Adjunt Professor College of Engineering Pune India; Former Deputy Director, National Environmental Engineering Research Institute (NEERI) Nagpur India

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Professor Ashok Deshpande PhD (Engineering)

Chicago YPAB Activity

Chicago YPAB organized YP Tutorial sessions and YP Social for this year's **2011 AIChE Spring Conference**, all of which were enormously successful! The technical sessions were in conjuction with the Separations, Environmental, Management and Fuels & Petrochemicals Divisions with speakers presenting topics of interest to Young Professionals in the first five years of their career. The Speed Networking Social was a fast-paced event where groups of YPs were given 15 minutes to network with event sponsors. To read the interview with Chicago YP, Jessica Swary, and to see photos of the Speed Networking Social, visit the AIChE's Chenected website:

http://chenected.aiche.org/young-professionals/yp-speed-networking-event-a-huge-success-interview-photos/

YP April Meeting

ChemE OnDemand Webinar Viewing

Retirement Planning for Young Engineers

Wed, April 27th, 2011 6:00-8:00pm

"Retirement may sound like a world away from where you are now, but there are some important steps that you should be taking to make your retirement everything you envision it to be. Our objective during this presentation is to provide information, which will motivate you, educate you, and inform you about the significance of saving for retirement today."

***Location:* Lombard, IL.** RSVP to jessicaswary@msn.com for address and directions.

For information on past and future events, visit the YP-Chicago website at www.aiche-chicago.org/ypab

Judges Needed @ IIT for Student Poster Competition

Judges are needed for the student poster competition that will be held at the **April 12** local section meeting. Posters will be judged on quality and organization, the student's delivery and ability to answer questions, and the importance/relevance of the project. Please contact pgherena@yahoo.com if you would be willing to assist.

Election Of Section Officers

ABSENTEE BALLOTS

Election of officers will be held at the annual meeting on May 11. If you expect to be absent from this meeting, you may vote by absentee ballot. Please contact our secretary at aichechicago@gmail.com to obtain one.

Scientists eye algae for nuclear cleanup

EVANSTON, Ill., April 4 (UPI) -- U.S. researchers say common freshwater algae can remove radioactive strontium from water and could be used to clean up nuclear waste.

Scientists at Northwestern University and Argonne National Laboratory say Strontium 90 is one of the more dangerous radioactive fission materials created within a nuclear reactor and is present in the 80 million gallons of radioactive waste sludge stored in the United States, a Northwestern release reported Monday.

Strontium 90 has a half-life of about 30 years and is chemically very similar to calcium and thus is drawn to bone, creating a high cancer risk from exposure when strontium is bound in bones for many years.

The researchers say Closterium moniliferum, one of the bright green algae often seen in ponds, can sequester strontium in the form of barium-strontium-sulfate crystals.

The knowledge could lead to using algae for direct bioremediation of waste or accidental spills in the environment, they say.

"Nuclear waste cleanup is a problem we have to solve," senior researcher Derk Joester, who experienced Chernobyl's radioactive fallout when he was a teenager living in southern Germany, said.

"Even if all the nuclear reactors were to shut down tomorrow, the existing volume of waste is great, and it is costly to store.

"We need to isolate highly radioactive 'high-level' waste from 'low-level' waste," he said. "The algae offer a mechanism for doing this, which we would like to understand and optimize."

Read more: http://www.upi.com/Science_News/2011/04/04/Scientists-eye-algae-for-nuclear-cleanup/UPI-45951301956566/#ixzz1lqylnPPV

Department of Energy Launches "America's Next Top Energy Innovator

Boston, MA - As part of the Obama Administration's Startup America Initiative, U.S. Energy Secretary Steven Chu today announced the "America's Next Top Energy Innovator" challenge, which will give start-up companies the opportunity to license groundbreaking technologies developed by the National Laboratories for $1,000 and build successful businesses. As part of this effort, the Department is reducing both the cost and paperwork requirements for start-up companies to obtain an option agreement to license some of the 15,000 patents and patent applications held by our 17 National Laboratories.

"America's entrepreneurs and innovators are the best in the world," said Secretary Chu. "Today, we're challenging them to create new businesses based on discoveries made by our world-leading national laboratories. Because we've cut the upfront fees and reduced the paperwork, we'll make it easier for start-up companies to succeed and create the new jobs our economy needs. Our goal is simple: unleash America's innovation machine and win the global race for the clean energy jobs of the future."

Currently, only about 10 percent of federal pat-

ents have been licensed to be commercialized. This initiative aims to double the number of startup companies coming out of the National Laboratories.

Specifically, as part of "America's Next Top Energy Innovator:"

1. On Monday, May 2, 2011, the Department will kick off the challenge by posting a streamlined template option agreement online for entrepreneurs to submit to Laboratories. Entrepreneurs must identify the technology of interest and submit a business plan to be considered for the program. Participants will have until December 15 to make their submission to the Laboratory.
2. Any of the 15,000 unlicensed patents and patent applications held by the National Laboratories will be available for licensing by startup companies
3. From May 2 to December 15, the Department will reduce the total upfront cost of licensing DOE patents in a specific technology to a $1,000 upfront fee for portfolios of up to three patents. This represents a savings of $10,000 to $50,000 on average in upfront fees.
4. Other license terms, such as equity and royalties, will be negotiated on a case by case basis and will typically be due once the company grows and achieves widescale commercial success. These fees help support the Department's continuing research activities to develop new technologies.
5. The Department will simplify the licensing process and establish a standard set of terms for start-ups, who generally lack the resources, time or expertise to negotiate individual licensing agreements. This will significantly reduce both the time and cost required to process the license, allowing faster access to the Department's patents and enabling the Department to process more licenses in a shorter amount of time.
6. Entrepreneurs who complete the process and demonstrate progress toward executing their business plan and commercializing the technology will have the opportunity to be showcased at the 3rd Annual ARPA-E Energy Innovation Summit in 2012, which brings together leading technology startups and clean energy investors from around the country.

In addition to these steps, the Department is making it easier for companies to use the world-leading facilities at our National Laboratories to conduct collaborative research and development activities. Previously, companies had to make an upfront payment covering the first 90 days of research work - a requirement that was often difficult for start-ups to meet. Today, the Department is lowering the advance payment requirement to 60 days. This change will benefit all companies - not just start-ups - but could be valuable for those participating in the "America's Next Top Energy Innovator" challenge.

Entrepreneurs interested in participating can already view the available technologies on the Department's Energy Innovation Portal.

Some of the promising innovations currently available for licensing and featured on the portal include:

Solar Energy Storage, Transportation and Conversion - available from DOE's Lawrence Berkeley National Laboratory Researchers at Berkeley Lab have developed a system for converting solar energy to chemical energy and, subsequently, to thermal energy. The system includes a light-harvesting station, a storage station, and a thermal energy release station that enables transportation of stored energy over long distances.Marketing Summary

Grid Friendly Appliance Controller - avail-

able from DOE's Pacific Northwest National Laboratory The Grid Friendly Appliance controller senses grid conditions by monitoring system frequency and provides automatic demand response in times of disruption. This simple computer chip can be installed in household appliances and can turn them off for a few minutes or even a few seconds to allow the grid to stabilize and prevent blackouts. Marketing Summary

Growth of Lattice Matched III-V Semiconductor Materials - available from DOE's National Renewable Energy Laboratory

High-performance semiconductor materials have a broad range of potential applications, including high efficiency solar cells, solid-state lighting, and high-speed transistors. This portfolio allows for the use of low-cost, scalable, and reusable substrates to dramatically reduce production costs for these materials.Marketing Summary

New Catalyst Can Reduce Nitrogen Oxide Emissions From Diesel Engines by 80-85% - available from DOE's Argonne National Laboratory.

The diesel DeNOx catalyst removes 80-85% of nitrogen oxide (NOx) emissions from diesel fuel combustion by converting NOx to nitrogen. With its lower expected manufacturing and installation costs, ease of use, and significant market potential, the Argonne catalyst is positioned to deliver the environmental-and economical-benefits needed to reduce our global industrial "footprint."Marketing Summary.

Read some recent examples (pdf - 162 kb) of established companies and start-ups that have commercialized Department of Energy technologies.

"Startup America" is an important element of the Administration's national innovation strategy. For more information about the steps announced today and the more than 15,000 technology opportunities currently available, visit the Department's Energy Innovation Portal.

JOB Opportunity

Now in its 25th year, ***Chicago Chem Consultants*** Corp is looking for "process engineering" senior associates to work on a project basis.

Ideal candidates will be retired or in a position to do project work. CCC works on a very broad area of somewhat non-traditional assignments and our past/present associate backgrounds reflect this. Everything from light process design, pilot studies, trouble shooting, legal forensic engineering support and ESOH regulatory compliance Note - this is not a permanent full time or part time position. CCC looks to add highly qualified engineers to its list of associates to fill key asignments that arise from time to time, some of whom have done so for the past 15+ years. Business project development is also encouraged.

Please browse www.chichem .com to review over 150 projects over the past 25 years as well as the other CCC associate backgrounds to see if you might fit. Respond to Jeffery P. Perl, PhD, PE, CHMM, 312-226-2436, jeffery-perl@chichem.com


SAVE THE DATE
AIChE Midwest
Regional Conference
UIC – Chicago, IL
Nov. 10-11, 2011
More information coming soon.

Upcoming Meetings

April 12, 2011	Student Night @ IIT
May 1-5, 2011	10th International Conference on Circulating Fluidized Beds and Fluidization Technology- CFB-10 Sun River, Oregon
May 2 –5, 2011	Offshore Technology Conference (OTC) 2011 Reliant Park Houston, TX
May 22-27, 2011	BIOENERGY III: PRESENT AND NEW PERSPECTIVES ON BIOREFINERIES Lanzarote, Canary Islands, Spain
June 5-8, 2011	AIChE-DECHEMA Global Conference on Energy Sustainability in the Process Industries (ESPI) Hong Kong University of Science and Technology (HKUST) Hong Kong SAR, China
September 11-15, 2011	56th Annual Safety in Ammonia Plants and Related Facilities Symposium Sheraton Montreal Hotel Montreal, QC
September 26-28, 2011	6th AIChE/SPE Joint Workshop - Challenges in Flow Assurance and Crude Oil Quality Omni-Houston Westside Houston, TX
October 4-6, 2011	OTC Brasil 2011 Riocentro Rio de Jneiro, Brazil
October 6-7, 2011	2011 AIChE Regional Process Technology Conference Moody Gardens Hotel Galveston, TX
October 16-21, 2011	2011 AIChE Annual Meeting, Minneapolis Convention Center Minneapolis, MN
November 10-11, 2011	AIChE Midwest Regional Conference UIC—Chicago, IL

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We are on the web
www.aiche-chicago.org

Chicago Section need your help

The Chicago Section is looking to identify members interested in volunteering. There are many different and rewarding positions available. Whether interested in networking, meeting other members, gaining leadership experience or just giving back, consider helping our AIChE Chicago Section continue to be the best! For more information, please call or email ***Jeff Perl*** jefferyperl@chichem.com, ***Shannon Brown***, SBrown@ambitech.com or ***Dennis O'Brien*** Dennis.O'brien@jacobs.com Opportunity for professional growth through organizational skill development, speaking etc in non-threatening atmosphere.

Submitting Articles to AIChE Columns

We welcome email submissions for our monthly newsletter. Commercial announcements are subject to the fee schedule below. News stories, editorials, technical or career related non-commercial contributions are always welcome with no charge. We consider job postings, announcements of for-fee training courses, expositions, conferences as commercial. Categorization of announcements is at the sole discretion of the Chicago AIChE Board of Directors. Chicago AIChE may publicize activities of interest to our members by cooperating professional societies and other non-profits without charge.

Please submit your material to **aichechicago@gmail.com** with "newsletter article" as a subject line.

AICHE Publicity Committee Fees	***Academic (non-AICHE)***		***Company***		***Recruiters***	
	Per Month	Per Year	Per Month	Per Year	Per Month	Per Year
Advertisements (3X3)	100	450	150	675	N/A	N/A
Half-Page (~7"x 4.5")	280	1260	420	1890	N/A	N/A
Job Posting (Size?)	50	225	100	450	250	N/A
Special Sizing	Contact Publicity Committee aichechicago@gmail.com					

For the purchase of a year ad, customers have the option of changing ads/jobs month to month.

Student and AICHE Member Related Postings are Free.